CRT-176

Transradial Versus Transfemoral Intervention in ST-Segment Elevation Myocardial Infarction Patients Undergoing Primary Percutaneous Coronary Intervention with Drug-eluting Stents

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Background: Transradial intervention (TRI) is drastically increasing in every intervention society around the world because of lower incidence of major bleeding and vascular complications compared with trans-femoral intervention (TFI). However, there have been limited publications regarding clinical outcomes of TRI versus TFI in ST elevation myocardial infarction (STEMI) patients (pts) of Asian population.
Methods: A total of 689 consecutive STEMI pts from nine major hospitals were enrolled from Jan to Dec 2009. Angiographic outcomes and cumulative clinical outcomes up to 12 months were compared between TRI (n=220, 31.9%) and TFI group (n=469, 28.1%).
Results: Baseline characteristics showed that TRI group had more smokers and a higher incidence of hypertension, diabetes mellitus and previous cerebrovascular accidents whereas TFI group had a higher incidence of multi-vessel disease, left circumflex lesion, type B2 or C lesion and chronic total occlusion. TRI group had a lower incidence of major and minor hemorrhage during admission. Clinical outcomes up to 12 months showed that recurrent myocardial infarction, target lesion revascularization (TLR) and target vessel revascularization (TVR) were lower in the TRI group. Propensity score matched analysis showed that TRI was an independent predictor of reducing TVR (OR: 0.08 95% CI: 0.01-0.67, p Value=0.019), MACE (OR: 0.37, 95% CI: 0.15-0.86, p Value=0.022), and MACCE (OR: 0.33, 95% CI: 0.14-0.76, p Value=0.010) at 12 months.
Conclusion: In our study, TRI in STEMI pts undergoing primary PCI with DES was associated with lower 12-months TVR, MACE and MACCE. We suggest that TRI may play an important role in improving mid-term major clinical outcomes of STEMI pts undergoing PCI with DESs.

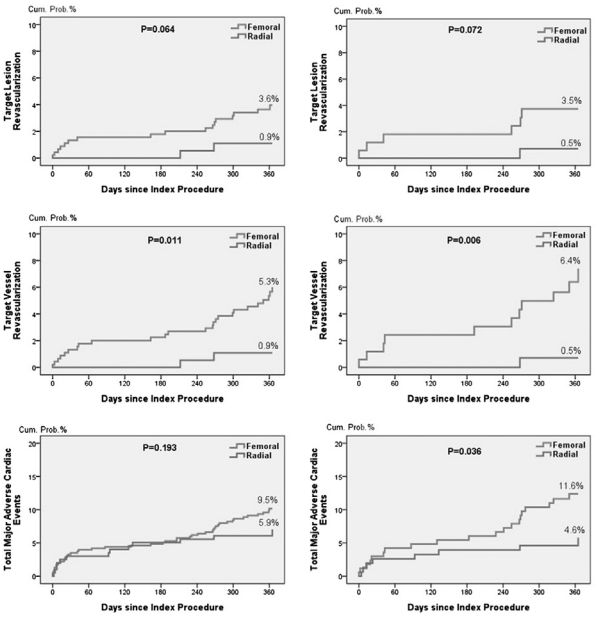

Figure (Left). Kaplan-Meier Survival Curves Describing Cumulative Incidences of Various 1-Year Clinical Outcomes.
Figure (right). Kaplan-Meier Survival Curves Describing Cumulative Incidences of Various 1-Year Clinical Outcomes in Propensity Score-Matched Patients

CRT-177

Ulnar Artery, is it as Safe as the Radial for Cardiac Catheterization?

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Background: The Ulnar Artery (UA) could be considered for cardiac catheterization, invasive monitoring or taking blood sample. But special care is needed to avoid complications mainly when its puncture (Ptur) for cardiac catheterization. We analyze complications of (UA) approach and propose the "How to do" UA puncture (Ptur).
Methods: We analyze 1405 consecutive patients (pts) in which the UA Apr was attempted from Nov-2002 till Jan-2013 in two cath lab. All studies were performed by operators with experience in transradial Apr. Follow-up at 24 hours and 3 months after procedure was indicated. Haematomas (H) and neurological complications related to the UA Ptur recorded.
Results: Of a total of 25212 pts, 1405 (5,5 %) were indented via UA. Mean aged 67 ±8 years. 66% were males, 35% were diabetics, and more than 55% had hypertension, hyperlipidemia or were smokers. Study was completed by UA in 1279 pts (91%). Initially, UA Ptur was attempted at the place where pulse was felt stronger. The main cause of crossovers was the Ptur failure (40% of cases). Out to 1635 procedures performed, 768 (47%) were PCI (81% by right UA. 53 H > 15 cm were documented; 12 (12%) of them, within the first 100 cases performed, and the rest 41 H, in the next 1305 pts (3.1%)*; There was only 1 temporary neurological complication related to the nerve compression by H. The unintentional Ptur of the ulnar nerve (UN) were painful and occurred in 137 (9,7%) pts without neurological sequel. In a Multi-Variable analysis of first 100 pts, the higher incidence of H was related to Ptur proximal to the wrist folds that led to a difficult compression of the artery. *($p < 0.05$)
Conclusion: Ulnar Apr could be another access way for cardiac catheterization, despite an higher than radial rate of vascular complications. Ptur at the level of the wrist skin fold is strongly recommended to reduce complications. According to the relationship between UA an UN, Ptur must be performed from lateral to medial, avoiding unintentional Ptur of UN.